General Specifications

Item	Specification
Fluid	
MERCON® V Automatic Transmission Fluid XT-5-QM	MERCON® V

Torque Specifications

Description	Nm	lb-ft
Fluid cooler tube nut at radiator	32	24
Cooler line bracket to engine nut	48	35
Fluid cooler tube nut at transmission	21	15

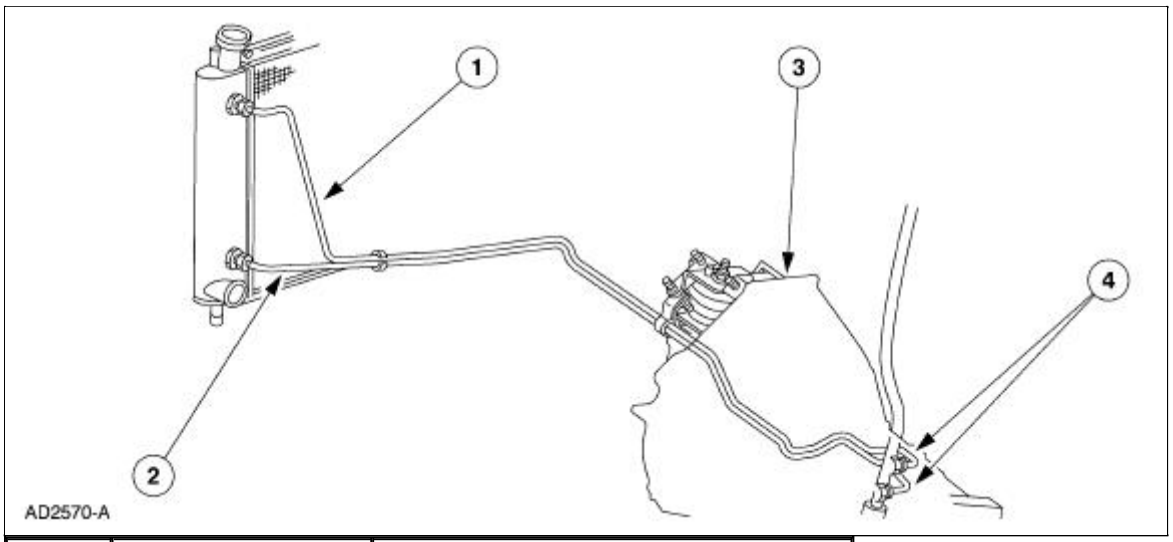
Transmission Cooling —Integral

This vehicle with an automatic transmission is equipped with an integral transmission fluid cooler. The cooler is contained inside of the radiator outlet tank and cannot be serviced separately. The cooler transfers heat from the transmission fluid to the engine coolant.

For transmission fluid cooler flow test, refer to Section 307-01 .

For transmmission fluid cooler backflushing and cleaning, refer to Section 307-01 .

Transmission Fluid Cooler Tubes



Item	Part Number	Description
1	—	Fluid cooler inlet tube
2	—	Fluid cooler outlet tube
3	7005	Transmission case
4	—	Transmission case fittings

Transmission Cooling

Inspection and Verification

WARNING: Never remove the radiator cap under any conditions while the engine is operating. Failure to follow these instructions could result in personal injury and/or damage to the cooling system or engine. To avoid having scalding hot coolant or steam blow out of the radiator, use extreme care when removing the radiator cap from a hot radiator. Wait until the engine has cooled, then wrap a thick cloth around the radiator cap and turn it slowly to the first stop. Step back while the pressure is released from the cooling system. When you are certain all the pressure has been released, press down on the radiator cap (with a cloth), turn and remove.

The transmission fluid cooler is integral to the radiator (8005). Whenever leaks or damage to the radiator are found, install an entire new radiator. For additional information, refer to Section 303-03A or Section 303-03B .

Symptom Chart

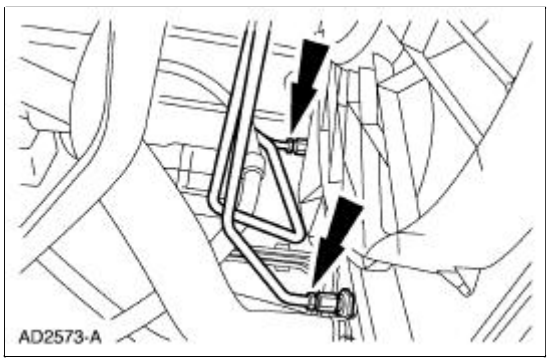
SYMPTOM CHART

Condition	Possible Sources	Action
• Transmission Overheating	• Damaged radiator.	• REPAIR or install a new radiator. For additional information, REFER to Section 303-03A or Section 303-03B .
	• System leaks.	• INSPECT for leaks. REPAIR as necessary.
	• Incorrect fluid level.	• ADJUST to proper level.
	• Fluid condition.	• INSPECT according to instructions under Fluid Condition Check. REFER to Section 307-01 .
	• Damaged, blocked, reversed, leaking or restricted cooler lines or cooler tubes.	• INSPECT cooler lines and tubes. REPAIR or flush as necessary.
	• Engine concerns causing transmission to overheat.	• INSPECT engine cooling system. For additional information, REFER to Section 303-03A or Section 303-03B .
	• Excessive towing loads.	• CHECK gross vehicle weight.
	• Incorrect idle or performance.	• REFER to the Powertrain Control/Emissions Diagnosis (PC/ED) manual.

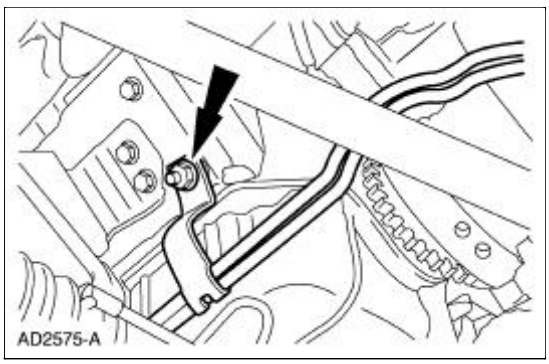
Transmission Fluid Cooler Tubes

Removal

1. Disconnect the battery cables.
2. Raise and support the vehicle. For additional information, refer to Section 100-02 .
3. Remove the nuts.

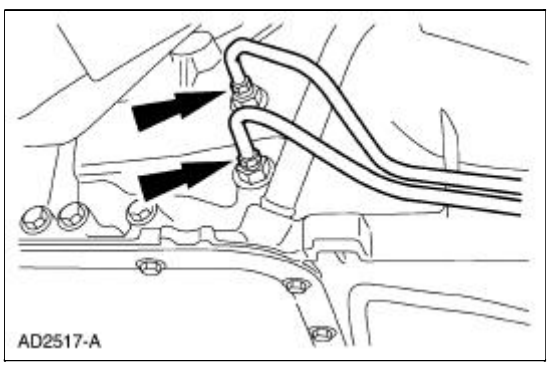


4. Remove the fluid cooler tube bracket at the engine.



5. **NOTE:** Use a backup wrench to hold the case fitting secure.

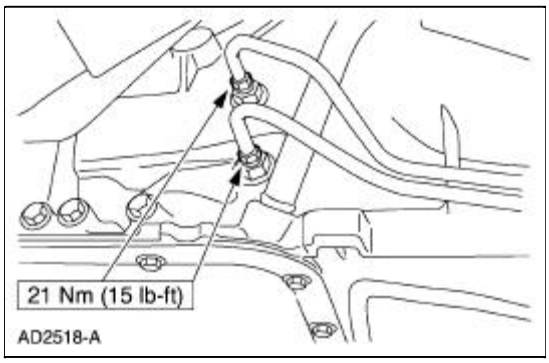
   Remove the fluid cooler tubes at the transmission.



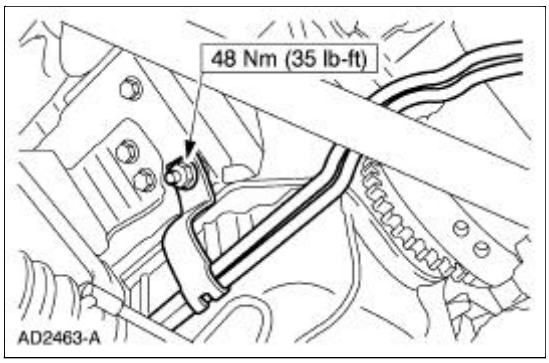
Installation

1. **NOTE:** Use a backup wrench to hold the case fitting secure.

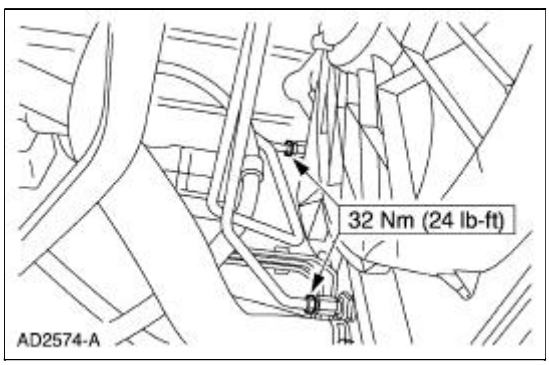
   Install the fluid cooler tubes at the transmission.



2. Install the fluid cooler tube bracket at the engine.



3. Install the nuts.



4. Lower the vehicle.

5. Connect the battery cables.

6. Fill the transmission with fluid and verify proper operation.
   - Use Motorcraft MERCON® V Automatic Transmission Fluid XT-5-QM or equivalent meeting MERCON® V specification.